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## VIRTUALIZATION OF iSCSI STORAGE

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### ABSTRACT OF THE INVENTION

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This invention describes methods, apparatus and systems for virtualization of  
iSCSI storage. Virtual storage isolates the clients from the management of  
physical storage resources. In this invention, each physical storage device  
supports multiple logical units (LUNs). Each supported LUN is associated with a  
separate TCP port number and iSCSI commands received on a given port  
implicitly refer to the associated LUN. An iSCSI host addresses each logical unit  
of storage (LUN) with a virtual IP address and port number. Using an address  
translation table, the virtualization gateway rewrites the destination IP address in  
the header of an incoming packet as well as the destination port number to  
correspond to the target physical LUN. Migration of logical units across physical  
storage devices is supported by changing the address translation entries at the  
gateway; and the gateway can be provided by a standard network router with  
support for address translation.

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